REMARKS

Claims 1-28 are currently pending in the subject application and are presently under consideration. A listing of the claims is found at pages 2-8. Claim 26 has been amended herein to correct a minor informality noted by the Examiner. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

Before proceeding, a brief discussion is provided on the employment of code stubs in association with object communications. As noted in the background of the subject application, in a conventional situation, object communications can be implemented by directing a call through *an external interface* referred to as "stub-code." One or more of these stub-code operations are particularly time intensive (*e.g.*, as compared to a regular call of a function in the same object system). For example, by utilizing a call through the stub, stack-based arguments often need to be copied onto a different stack location (*i.e.*, the arguments need to be pushed again) - even if marshalling for the actual data-types is unnecessary. Another problem relates to adding markers on the stack and can involve an explicit update of a linked list, for example, such that access to the root of that list is comparatively expensive (*e.g.*, processor execution cycles). Due to these and other issues relating to communications between object systems, there is a need for a system and methodology to facilitate improved execution performance when invoking functions and/or objects between object systems.

I.   **Rejection of Claims 1-2, 9-11, 14, 20-21, 24,25 and 28 Under 35 U.S.C. §102(b)**

Claims 1-2, 9-11, 14, 20-21, 24,25 and 28 stand rejected under 35 U.S.C. §102(b) as being anticipated by the article "Lightweight Remote Procedure Call" by Bershad *et al.* Withdrawal of the rejection is respectfully requested for at least the following reasons.

> "A claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). Emphasis added. "The identical invention must be shown in as complete detail as

is contained in the...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The subject invention, as recited in the claims employs an "in-lined stub" to facilitate communications between object systems. The in-lined stub is incorporated within the calling function which is clearly different than calling an external (external to the calling function) stub as is conventionally disclosed in Bershad *et al.* The in-line stub of the present invention facilitates higher processor execution performance than what is permitted by calling an external stub routine. In particular, at paragraph heading 3.2, page 45, of Bershad *et al.* discloses that a client makes an LRPC by calling *into* a stub procedure. Bershad *et al.* makes no mention or suggestion of incorporating all or portions of the stub within the calling procedure as recited in the claims. The type of call disclosed in Bershad *et al.* is made according to conventional external stub calls which is subject to conventional performance limitations.

Moreover, Bershad *et al.* does not disclose or suggest communications between managed and unmanaged object systems as recited in the claims. For example, managed system environments are noted in part by the presence of a garbage collection function for object management whereas unmanaged systems require the objects themselves to manage object lifetimes. Bershad *et al.* discloses communications between protected and unprotected domains which relates to security issues and thus, does not contemplate managed object systems as recited in the claims. Since Bershad *et al.* nether discloses nor suggests an in-lined stub and/or communications between managed and unmanaged object systems, it is respectfully submitted that this rejection be withdrawn for independent claims 1, 14, 25, 27, and 28 and claims that depend therefrom.

II.   Rejection of Claims 1-28 Under 35 U.S.C. §102(b)

Claims 1-28 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,081,665 to Nilsen *et al.* Withdrawal of the rejection is respectfully requested for at least the following reasons.

Nilsen *et al.* does not make up for the aforementioned deficiencies noted above with respect to Bershad. For example, as in Bershad, Nilsen *et al.* employs an external stub to facilitate object communications. Referring to the portion of the specification noted by the Examiner, Nilsen *et al.* describes a small procedure stub that is generated to represent each byte-code and native method in the system (See Col. 15, lines 49-58). The subject invention as recited in the claims does not employ a procedure stub that is generated to represent codes and methods. Rather, the subject invention utilizes all or portions of stub functionality *within* a calling function itself without relying on any external or generated procedures. In this manner, performance is enhanced over conventional stub processes.

Also, as noted above, the subject invention facilitates communications between managed and unmanaged object systems. Nilsen *et al.* appears to only disclose or suggest communications within a managed object environment and thus, does not disclose communications between disparate object systems (managed/unmanaged) as recited in the claims. Since Nilsen *et al.* neither discloses nor suggests an in-lined stub and/or communications between managed and unmanaged object systems, it is respectfully submitted that this rejection be withdrawn for independent claims 1, 14, 25, 27, and 28 and claims that depend therefrom.
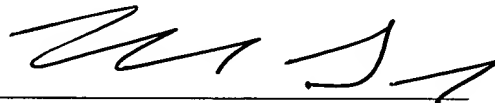
III.   CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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